D301.81:32/6

UNIV OF FLA LIBRARY DOCUMENTS DEPT.
JUN 28 1982
U.S. DEPOSITORY

Combat Crew

strategic air command

ANNIVERSARY ISSUE

JUNE 1982

"I believe that a continuing study of military history, combat leadership, the principles of war, and particularly the application of airpower, is necessary for us to meet the challenges that lie ahead."

- Gen. Lew Allen Jr., Chief of Staff, U.S. Air Force

Project Warrior

Readiness Assessment.....

The warrior assesses readiness and prepares for combat with no illusions about his capabilities and the requirements for success. He knows that in the court of mortal combat, there are no appeals for limitations nor bargains for mistakes- the final verdict favors those who are the best trained, the best equipped, and led by the most effective commanders.

Sac Inspector General
Brig Gen Harold J M Williams
May 1982

General Lew Allen Jr., chief of staff of the U. S. Air Force and a member of the Joint Chiefs of Staff, serves as the senior uniformed Air Force officer responsible for the administration, training and equipping of a combined active duty, Guard, Reserve and civilian force of nearly one million people serving at nearly 3,000 locations in the United States and overseas.

Combat Crew

Magazine of the Strategic Air Command — 32nd Year of Publication

GEN. BENNIE L. DAVIS
COMMANDER IN CHIEF, SAC

BRIG. GEN. HAROLD J. M. WILLIAMS
Inspector General

COL. RICHARD A. PATRICK
Director of Safety

STAFF

CAPT. ROSS W. PHILLIPPE
Editor
G. FRANCIS FARRELL
Associate Editor
SSgt DAVE WADE & Sgt. STEVE PARRISH
Art Editors
MARY JANE ABBOUD
Editorial Assistant

IN THIS ISSUE

Confusion 4
Task Force 6
Different Light 8
Herk of a Refueling 10
CFIC Corner 14
BIG I 18

ON THE COVER

IT'S
FOR
YOU
COMBAT CREW

SACRP 127-1 VOL XXXII NO. 6 JUNE 1982

[illegible]

COMBAT CREW (RCS: SAC/IGFC ...) Authority to publish this periodical automatically expires on 23 Oct 83, unless its continuance is authorized by the approving authority prior to that date. **DEPARTMENT OF THE AIR FORCE**

CONFUSION

Capt Clifford M. Wippel
46th ADW, Peterson AFB

How many times have you found yourself transitioning from a normal everyday activity to a completely confusing situation? Perhaps you were driving down a road and suddenly found yourself sliding sideways on snow or ice, or you were awakened in the middle of the night by a phone call. One instant everything was fine and the next instant you didn't know what was happening. It is during these fleeting moments, when total confusion takes over, that the inputs we are receiving don't make sense. It takes time to figure out what is happening and the consequences of this delay can vary with the activity being performed. If we become confused during a critical phase of flight, such as takeoff roll, the consequences can be eminently costly.

I had the chance to experience such confusion firsthand on an aborted trip to the European Tanker Task Force. We were deploying a KC-135 to Pease to stage for a fighter 'drag' to Europe. We had a basic aircrew of four, and two ground crewmembers on board. As we rolled over the hold line, my mind was admittedly wandering a little. Despite the impending start of the takeoff roll, I couldn't help thinking about dinner in New Hampshire and wasn't overly concerned with the maneuver I was performing. Sure, the required performance criteria and emergency procedures were briefed, but this was only a takeoff, one of the simplest maneuvers performed in an airplane with the exception of flying straight and level with the autopilot on.

What happened in the next few minutes caused considerable damage to an airplane, changed my mind about the simplicity of the takeoff maneuver, and resulted in an unofficial world's record 200 meter centerline team relay (the record is pending certification of the course). I'm not relating this to place blame or pass judgment on crew reaction, or the reactions of any of the participating parties. What I would like to do is relate an incident that happened to my crew from my point of view, analyze the collective reactions of those involved, and perhaps give you something to consider when you are briefing your next takeoff.

We had planned for a wet takeoff. After the aircraft was taxied into position the engines were advanced to takeoff thrust. I took a cursory glance at the engine instruments and was satisfied that all engines were taking water. Almost immediately after releasing brakes, I noticed number two engine had not taken water. Not to worry, yet. We were relatively heavyweight and accelerating slowly. I had time for one or two tries to get water to that engine before I had to abort. This consisted of retarding the throttle for that engine below water cut-in rpm and readvancing it. The first try was unsuccessful, and I mentally decided that I'd give it one more try before aborting.

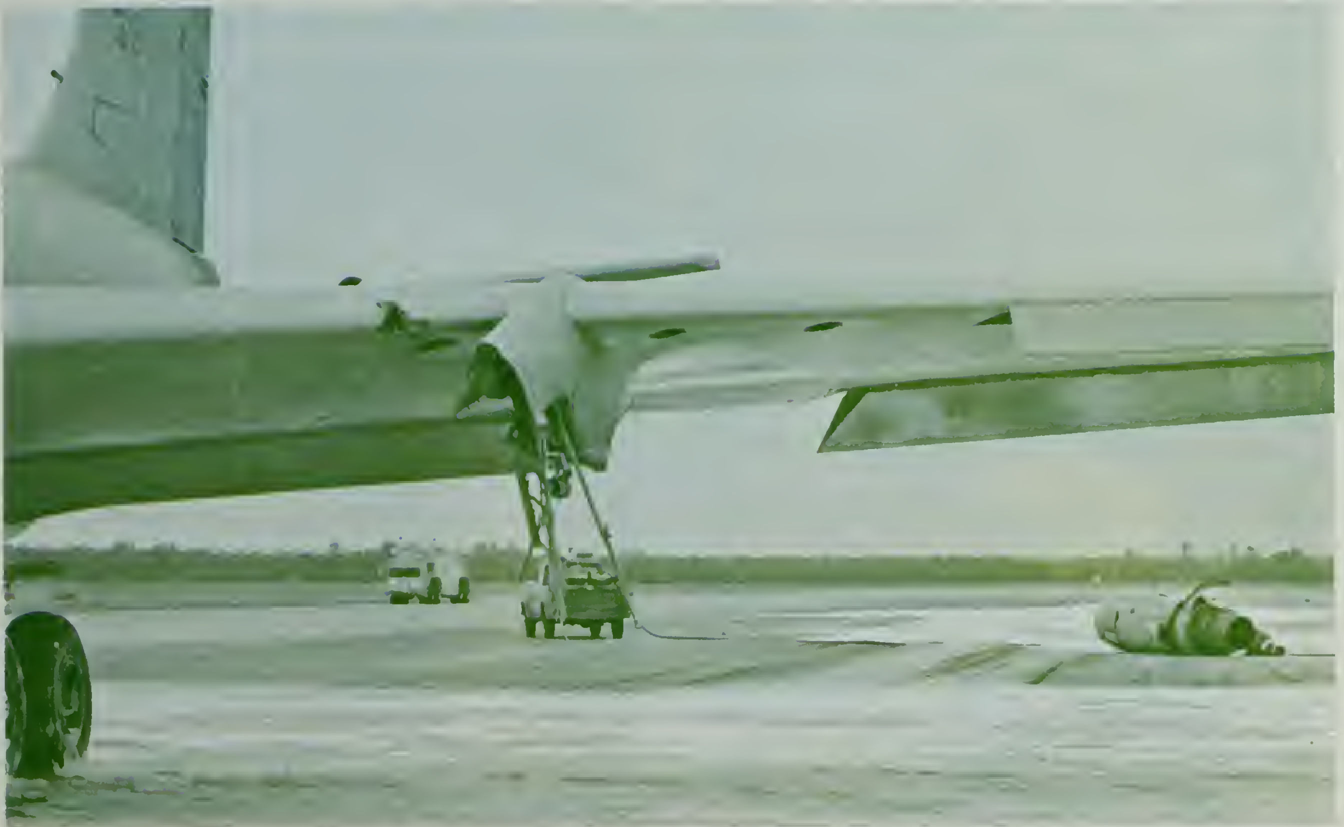
The second reapplication of power produced water injection, followed a split second later by a resounding explosion, vibrations, and definite directional problems. Being a fairly quick minded individual, this was all the indication I needed to decide that the airplane was not going to fly on that try.

Immediately after I initiated an abort, the tower transmitted that we had lost a tire. I accepted this first explanation as plausible; we had vibrations and directional problems, so a lost tire was not unreasonable. I did question, somewhere in the back of my mind, what connection a tire had with the application of power, but this first explanation was fine for the time being. A second or two later, the tower transmitted something to the effect that the tire was rolling down the runway beside us. By now, I'm becoming doubtful about the 'tire' explanation, considering the ground speed at which we initiated the abort (about 30 knots), and the initial explosion phenomenon. The third transmission from the tower was something approximating "Boxcar 60, you're on fire." My first reaction to this revelation was skepticism: how can a lost tire result in a fire? My mind was still processing the 'lost a tire' theory, and this apparently conflicting information wasn't helping me sort out just what the problem was. By this time, we had stopped somewhere in the vicinity of the centerline, about 1000 feet from the approach end. The copilot reiterated the tower's observation that we were on fire. Since the engines we still had running were doing us no good, I finally shut them down. We decided that the only important thing at this stage of the game was to get out of the airplane, and vacate the immediate area.

While the boom operator and crew chiefs untied the crew entry ladder, I directed the copilot to scan his side of the aircraft to check for fire. I did the same on my side and although I was relieved to find no fire, things did not look quite right. I counted only one engine. Where the inboard engine had been were a lot of pipes and wires hanging down. The engine was gone.

Things started to fall into place, now. The copilot and I verified there was no structural fire that we could see, only a missing engine. By now, the ladder was in place, and egress was in full swing. I was to be the last person down the ladder and as I watched each crewmember get to the bottom, I could see them look to the rear of the plane, abruptly turn to the front, and smartly disappear. As I got to the bottom I found out why. The engine that had so recently been part of our airplane was now lying unceremoniously on the runway, leisurely burning up

continued on page 24



ICELAND TANKER TASK FORCE

An Aircrew Perspective

Captain Harold D. Shoemaker
91 AREFS, McConnell AFB

Have you ever had the opportunity to fly off alert? I don't mean after alert changeover before you go on C², either. I'm sure some of you probably have, but those of you who go to Keflavik for the Icelandic Tanker Task Force have a very strong possibility of launching while on alert. In this article, I'd like to give you an idea of your duties while on alert at Keflavik, describe what an alert scramble mission is like, and finally give you an idea of what's available for your free time while in Iceland.

ALERT DUTIES

The primary function of the Icelandic Tanker Task Force is to provide air refueling to ADCOM F-4 interceptors and the AWACS E-3A. Due to Iceland's location, quite often, unidentified aircraft come very near to, or even penetrate, the Icelandic ADIZ. These aircraft must be identified by the F-4's stationed at Keflavik and it's our job to extend their range and loiter time so they can make successful intercepts. Therefore, the 11th Strategic Group at RAF Fairford provides one KC-135 and two aircrews to provide alert support at Keflavik. Also on alert at Keflavik is an E-3A whose purpose is to extend the radar range and direct intercepts beyond the range of ground based radars. Your KC-135, the F-4's, and the E-3A make up a very successful team which works like clockwork 99% of the time. For example, while I was in Iceland on my two week tour, I launched three times on alert scrambles working with the airborne intercept team to make successful intercept and identification of several aircraft. My aircrew really enjoyed the missions and felt a real sense of accomplishment afterwards.

While at Keflavik, you will probably be on alert two days and off two days. While on alert you have the run of the base and also have the use of a van. Also, your crew doesn't have to stay together at all times; just let your aircraft commander or another crewmember know where you're going and be ready to go fly if they come and get you. Your crew will have a portable two-way radio which is your primary alerting method, so leave it on all the time, even while you sleep. If you do get alerted, you've got about one hour at the most to get airborne. Hurry, but remember, it's not an EWO launch. Your aircraft is hangared and cocked without cartridges, so all you need to do is get it pushed out of the hangar, align the INS (Be sure and do this!), start the engines, and takeoff. Well, that's the big picture; what do you really have to do on a scramble? I think I can best explain this by taking you through a sample mission from scramble notification to post-mission duties.

THE SCRAMBLE

A loud tone comes over the two-way radio followed by "Tanker One, this is dispatch, scramble MOGAS 20, acknowledge". You respond, "Tanker One, acknowledges". They will then come back with something like "Tulsa Charlie via Tulsa Three"; this is your routing for the mission. You are going to the Tulsa Charlie area on the east side of the island via the Tulsa Three entry point. In actuality, you can go via 13 different routings to various areas, but every one of my scrambles was like this.

After you're alerted, gather your crew, hop in the van, turn on the rotating beacon, and head for tanker ops at the speed limit. If you have the time

while waiting for a slow crewmember in the BOQ, tune in Channel 1 on the television and check the weather, but it's not totally necessary at this point. When you get down to tanker ops, each crewmember has different responsibilities, so I'll break down each person's duties now and bring you back together at the airplane.

Aircraft Commander — Go right into tanker ops and talk to the task force commander, Tanker Charlie, about the mission. Then, gather up the mission folders and head on out to the airplane. Maintenance should be there and either be ready to push the plane out of the hangar or have power on with the INS aligning. If they're not ready to push the airplane out, you might have to get power on and align the INS yourself. So, have your navigator check you out on the alignment procedure. You need the INS, so don't move the airplane until it's aligned. Let me add here, if they're ready to push the plane out when you arrive, go ahead, then align the INS when you're out of the hangar. Once you get the plane towed out, be sure you have six safety locks on board. Well, that's about all you can do except figure out what routing you're taking and mentally prepare yourself for the flight.

Copilot — Once you get to tanker ops, take your performance manual and the canned takeoff data folder upstairs to the AWACS briefing room. There you will find a television from which you can get the weather. Also, call the weather station for any updates and ask for the weather in the United Kingdom, specifically Leuchars, Lossiemouth, Mildenhall, and Fairford. They won't be able to give you the Fairford weather right away, so just tell them you'll call them on METRO when you get to the airplane.

Run your takeoff data, and don't be in a great rush to get out to the plane. It's already cocked and your aircraft commander can take care of everything needed to get it out of the hangar. The weather at Keflavik is very erratic with strong winds, wet runways, and temperatures in the range where anti-ice will be needed. Also, there are four runways and each one has a slope. You might have to take advantage of headwind and ground minimum control speed is usually quite high after corrections for crosswind.

Something else you'll run up against are MU readings. You get these instead of RCR readings. MU readings are explained in the enroute supplement, so take a good look before you go on alert. Basically, you'll get three numbers like 60 60 60. These numbers describe the braking action in each third of the runway. Now, how do you convert this to RCR? One method is to subtract 20 from each number to get RCR. But be sure and ask if the runway's wet, in which case you use a 9 RCR or a 4 RCR if it's icy or snow covered.

One last, but very important item! All winds in forecast or radio transmissions are true heading winds — add 25 degrees of variation to get magnetic.

continued on page 12

Looking at Night Air Refueling Under A Different Light

TSGT Edward F. Mazzoni
904th AREFS
Mather AFB

The Date — today, the place — any anchor air refueling area, the time — 2200 hrs local. There is no moon tonight and there was a write-up on the AFTO 781 that said, "boom nozzle light is very dim." It was left open, no action taken. You, the instructor boom operator, are expecting three sets of fighters, four planes to a set. They are all F-16s. According to the air refueling manual, we can refuel the receivers because the nozzle light does work. You and I both know how difficult air refueling at night can be. When you complicate it with fighters, no moon, and a dim, but working, nozzle light, it can become downright challenging. Cheer up booms — help is on the way.

For the last four months, we of the 904th AREFS, Mather AFB, California, have been involved with testing a new concept in night air refueling. One of our KC-135As has been modified with a tail-mounted floodlight. The light is mounted on the top of the vertical stabilizer (see photo) and shines down over the air refueling envelope. It is controlled by a rheostat located in the boom pod on the boom operator's panel. The rheostat has an "off" position along with ten different intensity settings. The telescope at disconnect switch was relocated to make room for the floodlight rheostat.

The light itself contains two light bulbs. These bulbs are similar to the cargo compartment lights of a C-141. There are four frosted spots on the clear lens of each bulb. These areas are actually light diffusers. At full intensity, the light produces approximately twice as much light as a full moon.

Since the light has been installed on our aircraft, we have flown tests against F-15s (A and B models), B-52s, (G and H models), A-10s, C-141s, F-111s, and F-106s (A and B models). Questionnaires were completed by the boom operators after each flight. Completed pilot and boom operator questionnaires were forwarded to the 4200 TES, Edwards AFB, CA.

We have been to Davis-Monthan AFB, Arizona, and Hill AFB, Utah to conduct briefings with squadron commanders, operation officers, squadron instructors, and line pilots. On all night refuelings we attempted to have one of our squadron instructor boom operators as well as two line boom operators aboard the aircraft. This served two purposes. The first was to let as many of our booms as possible "see the light" and second, to get as many opinions and evaluations on the light as possible.

The evaluations of the light by the boom operators were very favorable. Two problem areas were discovered and these will be covered later. Some of the favorable areas noted were an increased visibility of the receiver, rate and direction of movement, location of the canopy antennas, and the location of the receptacle. With the rheostat set at the recommended position, the various receivers took shape. Instead of looking at a flat surface, similar to looking at a photograph, the receiver became three dimensional. This greatly improves one of the weakest areas of night refueling — distance judgement (depth perception).

As we all know, depth perception is what allows us to judge the distance between the tip of the boom and the surface of the receiver. Without it, boom operators have difficulty keeping the boom from striking the receiver prior to contact. Unfortunately, striking the receiver does not just scratch some paint off. It can lead to breaking off of antennas and other major problems as well as big number III on a checkride.

Next to depth perception, the most important item necessary for a safe refueling is the ability to see. With the F-16 receiver, the light illuminates an area that covers from wing tip to wing tip, from the nose of the receiver to the tail. With this large an area visible to us, we can see the location of antennas and where a canopy begins and ends. We can also see the movement of flight control surfaces. The movement of these surfaces is a cue to movement of the receiver. This enables us to follow the movement quicker and reduces the chance of nozzle cocking. All of the above items make night air refueling safer from our end.

Under the canopy is another factor that contributes to a safe air refueling the receiver pilots. How does the light affect them? Are there any glare spots? Does the light shine in their eyes? Do they like or dislike the light? We will look at these questions and attempt to answer them with information from the receiver pilots' questionnaires and information provided during refueling.

After briefing F-16 pilots at Hill AFB, Utah about the floodlight, we conducted the air refueling missions as one pilot approached the combat position, he stopped his forward movement and asked, "Where is the light you told us about?" We told him that it was on the top edge of the tail. He then backed out, looked up and said, "Oh yeah, now I see it." He then came back in and got his briefed offload with no problems. The more aircraft that we refueled, the more apparent it became that the floodlight was not adversely affecting the receivers. This was confirmed by the questionnaires returned to our squadron. All of the receiver pilots stated that they came under the light at approximately thirty feet from the contact position. When asked if the light bothered them they replied that it did only when they looked directly at it. There were a few instances when we were asked to turn the light down. There are three to four recommended settings for each receiver. With the light at the lowest recommended setting the pilots had no problems.

Another area of concern was glare or hotspots. None of the pilots complained of hot spots. One of the F-16 pilots and both of the F-111 pilots mentioned a glare on their instruments. Even with the glare they were able to complete the offload with no major difficulties. If a checklist or any paper (like a map) was placed on or near the windscreen there would be a reflection from the light.

Of all the receivers questioned, the F-16 and A-10 pilots commented most favorably about the floodlight. The A-10 pilots commented about how the light gave them a much better reference when approaching the contact position. The general consensus of all the receiver pilots was that they liked the light and felt that it enhanced the safety of night air refueling. Anything that makes air refueling safer is something that the pilots like and want to see become adopted throughout the Air Force.

During the testing period our boom operators noted two problem areas with the modification. Both problems were inside the boom pod. The first problem is with the telescope at disconnect switch. The switch was relocated to a position just below the signal coil test switch. There is no illumination on the switch. This created a problem when going from manual to auto retract and back again. The other problem area was also minor. The underbody underwing and boom nozzle rheostats were repositioned. If the rheostats are not seen during preflight, the nozzle light can be turned on by mistake. Both problems will be solved with the new backlighted panel and legend lighted telescope at disconnect switch.

As stated earlier in this article, help is on the way. The boom floodlight has been approved for installation on all KC-135A aircraft. The light improves visibility, aids depth perception, poses no major problems for receivers, and makes night air refueling much safer. Who can argue with safety?

ONE HERK (of a) REFUELING!

Capt Onesimo Solis Jr.
KC-135 Instructor Pilot
917th AREFS, 96 BMW

“You say you've never refueled a C-130? You say you'd like a chance? Well friend, step right up and give're a shot.” That carnival-like atmosphere happened here when we were told that four crews from our squadron were to provide refueling support during a C-130 exercise. And, of those sixteen stalwart crew members, only one had ever refueled a Herk. “No sweat,” you say, “Grill him for all the info and study up on the Dash-3 procedures.” That's all well and good for most receivers, but, when this one has props, the rendezvous requires an overtake, and the 11,000′ altitude puts you close to the mountains, the experience is unique.

My crew was to lead a two-ship tanker cell refueling two C-130 Hercules. After studying the refueling manual and grilling our resident expert, I felt we were ready. We were going to use the Enroute Overtaking Rendezvous procedures described in the Dash-3, so special emphasis was placed on how it would work out in cell formation. The flight went smoothly and the rendezvous went off as advertised. Afterwards, we sat down and compared notes on what happened and what techniques we had used. Hopefully, you'll find them as useful as we did.

At the briefing, the weather shop gave us a forecast altimeter for start A/R, end A/R and a midpoint. My initial reaction was to ask myself, “Why?” “You'll be at 11 grand, that's why,” said the quick witted tanker jock in the back of my mind. Indeed, it's not often we operate below 18,000 ft during refueling and if terrain blocks out reception, it's nice to know what to expect for an altimeter setting. This is also a good time to compute a .6 AOA approach speed at 20° of flaps for your estimated gross weight during A/R. Since some receivers will ask you to pull back the airspeed as they get heavier, knowing how slow you can go will definitely help. Once you start refueling, turn on the RGA and speed deviation switches. By using the AOA gauge and the fast/slow speed deviation pointers you can cross-check your progress.

While enroute to the refueling track, preposition your scheduled off load in the forward and aft body tanks. The high pitch angle required during A/R will make it hard to drain forward from the center wing. Also prepositioning fuel will stabilize the center of gravity early enough to make level flight trim inputs realistic. Our expert suggested that we place about 5,000 pounds of extra fuel in the forward body in case the A/R pumps couldn't get to some of the fuel. Though our receivers didn't need all the scheduled off load, the others did and those tankers found that the extra 5,000 pounds was needed to complete the refueling.

Since we had to descend from FL 280 to 11,000 ft prior to the rendezvous, I had Number Two go to echelon after we got our clearance. In this formation the rest of the cell can concentrate on flying the airplane instead of staying above you and avoiding your wake turbulence. They can also help you look for the receivers during the descent. Remember, the C-130's will be ahead and below you and it might be hard to pick them out of the ground clutter. This tactic will require you to monitor position more closely and as cell lead, you'll have to be a little further ahead of the program than normal, but we

found that it was worth the effort. As you pass 18,000 ft, reset your altimeters and confirm the setting with center, the cell and your receivers.

Still in the descent, we established visual contact with our receivers and I had the cell disengage the autopilot, except for the rudder axis. This helped our level off and ensured it was done before we slowed down and lowered the flaps. I also noticed that rising terrain on either side of our track might make the standard 60° right echelon tricky if we had a breakaway. So, we closed it up to 1/2 NM, 60° right and 500′ of separation. This worked out quite well for us and our receivers. They wasted little time joining up with the tankers after the rendezvous.

We leveled off slightly behind the receivers and followed the procedures described in the Dash-3 for the overtake. The merits of this procedure were obvious when we were established on speed about 1/2 NM ahead of the C-130's. At 200 KIAS and flaps set to 20 degrees we were ready to refuel. To maintain airspeed and altitude, I had decided to use, as a target, the traffic pattern settings for fuel flows and trim. For fuel flow use: (Gr wt X 0.1) = 1000 pounds to hold airspeed. Trim should be about two units nose up. These are targets only and a little fine turning will minimize throttle movements and make the aircraft very stable, even during refueling.

I passed these settings to Number Two and had the copilot check on his position. Well, Number Two was ahead of the 60° line and after a few minutes was trying to take over the lead. This brings up another problem and that is: Power Management. High gross weight, low airspeed/high AOA and low altitude can cause slow acceleration or deceleration. Maintaining a .6 AOA airspeed when you're heavy or watching your flap placard speed as you off load fuel will require some extra diligence in this environment. An airspeed range from 190 KIAS to 210 KIAS can be maintained by setting target fuel flow settings and anticipating power changes.

During the actual refueling, I found the C-130 closure rate to be very smooth and that bow-wave effects were negligible. There was a small amount of nose up trim needed at about the ten foot call but both aircraft were stable and level flight could have been kept with hands-off. For the off-load, we used two pumps and alternated from the aft to the forward body tanks at 5,000 pound increments. This kept our center of gravity from moving around too much during the 37,000 pound off-load.

Well, we had finally finished refueling and had reached the end A/R point. That called for a right climbing turn since a 11,500 foot peak was in our way. I bid our receivers a good day and a good flight and had Number Two turn first, making the quickest lead change in history. But, that's all together a different story.

Some of the techniques described above are just that, **Techniques.** They may not work in all situations and are not meant as substitutes for applying sound judgement to established procedures. What they are meant to do is get you to think about the variety of environment we, as tanker crews, operate in. Refueling speeds from 190 KIAS to 355 KIAS and altitudes from 8,000 feet to FL 300 require a conscientous effort to stay abreast of techniques and plan ahead for every flight.

ICELAND . . .

Continued from page 7

The runway directions are magnetic, but the winds are true. Also, don't forget anti-ice corrections with visible moisture between 0 and 47 degrees.

Navigator — Once you get to tanker ops, go right upstairs to the AWACS dispatch counter. There you will get your routing, HF frequencies, flight orders, and secrets. Your mode 4 gun might have to be keyed. After you get the paperwork and secrets, head on out to the airplane and align the INS. Your pilot or maintenance might have already started the alignment. One thing you might check when you start the alignment — make sure the N-1 is not in grid; this might cause a nice delay.

Boom Operator — Once you get to tanker ops, just stay with your aircraft commander. The Form F should already be on file and a jug of water should be on the airplane. Go on out to the airplane with your pilot and help with getting the plane out of the hangar. A quick double check of the gross weight and CG and you'll be all set.

Well, you're all at the airplane now, ready to start and go fly. Your flight plan has been automatically filed for you, so just pull the ICAO flight plan for your routing from the folder for your own reference. Go ahead and start engines and prepare to taxi. You will take your crew chief with you, so don't close the door too early. Once you're started, go ahead and accomplish as much of the taxi checklist as possible before you come out of the chocks. "Tanker Charlie" will give you a last chance inspection before you taxi and this is a good time to review takeoff procedures and departure routing with your crew. Once "Charlie" has cleared, get clearance to taxi, and finish the remaining items on your checklist. You will be cleared to one of four runways and have absolutely no delay in takeoff clearance.

For your departure you will take off static with 30 flaps and fly an SID published in the European FLIP SID book. Be sure and doublecheck your flight plan for the correct SID; there are several different ones for Keflavik. On departure, you talk to Keflavik Departure Control and are usually cleared immediately to your filed altitude, FL 270. Shortly after takeoff, the boom operator will want to get a boom check. After this, call back to "Out weight" (AWACS Dispatch) and tell them the status of your aircraft. Keflavik will hand you off to Rejkjavik Control on your climbout, but you might want to try this option.

On your other UHF radio, call "Drainage," the GCI site on the western side of the island, on 364.2, and see if they can assume control from Rejkjavik for your mission. This will make things much easier for you since the F-4's takeoff shortly after you and they'll be looking for gas. If you're working with "Drainage", they'll handle the refueling rendezvous with ease. The GCI on the east part of the island, "Critic", might also get involved, but you'll be handed off to them if necessary.

On the first refueling, the fighters will take about 6500 lbs each. Keep the radio chatter to a minimum and save your offload report for relay to the GCI or AWACS. Also, AWACS or GCI will want to know what each F-4 got. About midway through the first refueling, AWACS will probably take control of you and the fighters, if they haven't already done so. It's best to be under AWACS control; then, there are not so many players on the field and confusion is kept to a minimum.

Once you've finished the first refueling, you're going to have to do some quick fuel computations. The AWACS will want to know how long you can stay on station and how much fuel you can offload. If you're on the east side of the island, it works out to about 1+20 with two more refuelings of about 13 or 14 thousand pounds. If you go further east, this time might decrease since you need to arrive overhead Keflavik with 31,000 pounds of fuel. There's a bingo fuel chart in the package and it works very well. Don't cheat yourself on fuel! The weather at Keflavik can really change fast and it's a long way to Scotland.

Well, for the next hour or so you're on station you will be vectored all over the place by AWACS. Ask them if you can slow down to save fuel, but be sure and keep track of the fighters so they don't pop up behind you looking for gas while you're flying at best endurance. The AWACS controllers will work the second and third refueling rendezvous on the refueling frequency and also give you vectors during the refueling on the same frequency. It may sound confusing, but works out quite well. Once the fighters go off on their intercept, they'll change frequencies. You might want to put that frequency in your other radio to listen to the intercept; it's really very interesting.

Basically, you keep flying around the area until you hit bingo fuel or the intercept activity is complete. AWACS will get your clearance back to Keflavik, then hand you off to "Critic" for the trip home. Ask "Critic" for the Keflavik weather or wait until you're about 180 miles out and talk to METRO. Also, try and get in touch with "Outweight" and pass your fuel and maintenance status.

For descent into Keflavik, Rejkjavik Control will start you down whenever you want and then hand you off to Keflavik Approach for your arrival. There are a variety of approaches available and with four runways, make sure you've got the right minima. Another thing to remember is all winds you receive over the radio are true heading; add 25 degrees for variation.

After landing, you still have to accomplish the same paperwork as with any other mission. Maintenance will immediately begin to upload fuel, so you might have to recock the airplane within an hour or so after landing. Also, don't head right for the beer machine; you might have to go fly again shortly and your replacement crew didn't go into crew rest until you took off. Don't worry, you'll get your time at the bar, if that's what you like to do.

I hope my explanation of a basic mission has given you a little insight into what goes on and also some of your basic tasks. This mission is really flexible and you're in total control of the refueling aspect of the intercept mission. I think you'll enjoy flying a scramble mission, but don't be terribly surprised if you're alerted and get cancelled somewhere before takeoff; it happened to me about five times. Well, that's the on-duty side of things, what's there to do in Iceland?

OFF DUTY TIME

I'm sure you hear the word Iceland and immediately have a mental picture of glaciers and great snowy blizzards. Believe me, it's not like that at all. In fact, the lowest temperature ever recorded was 1F, and while I was there in late January, the coldest it got was 25F with a high of 47F. Sure there's a bit of snow every once in a while, but mostly you'll have rain with high winds when the weather is foul. But, contrary to what you might have heard, Iceland is really a beautiful country with beautiful mountains, fjords, and lush mountain valleys.

Keflavik is a NATO base which is run by the US Navy and it's really well equipped with nice facilities. For the officers, I think the one place you will always remember is the dining room of the officier's club. It is considered an essential feeding facility and every meal we ate there was nothing less than excellent. Each evening meal has a flat rate charge of $3.00 with higher prices for steak night and other specials, around $4.00. You can eat all you want, and I'm sure you'll probably go back for seconds on something at each meal. After dinner, you can put a few coins in the slot machines or have an after dinner drink if you're not on alert. Also, about four nights a week they show movies in the ballroom. I think the officers will find the club quite nice.

For the enlisted, there are two clubs, one for E-1 through E-5 and another for the top four. There is an enlisted dining hall and also several other places to eat such as the USO, Marine Klub, or Viking Mall snack bar. If you like to cook, there's a nice commissary and our building has a kitchen with utensils.

As far as other base facilities go, there is a nice Navy Exchange and Icelandic gift shop with very good prices on wool goods. Also, you might spend some time at the gym with its heated olympic pool, sauna, steam room, solarium, racquetball courts, and weight room. Another nice facility is the tape center where you can record from over 2800 master tapes onto your own tape for 2¢ a minute. They also have woodworking, ceramics, and photography hobby shops. I think you can see that the base is quite well equipped for your leisure time.

You will probably want to get off base and see as much of Iceland as you can. The base is located next to the small fishing village of Keflavik about two miles away. There you can catch a bus for Rejkjavik, the capitol, which is about 30 miles away. It cost 32 Kronur, about $3.10, each way for the trip in Rejkjavik where you will find many nice shops and very friendly people who all speak English. If you are interested in night life, Rejkjavik has quite a few discos which are usually quite crowded on any given night. Drinks cost about $7.00 each and if you miss the bus, it's a $26.00 cab ride back to the base. You can rent a car, not cheaply though, and one drink before driving puts you over the limit in Iceland. One other note about night life. There's a curfew of 2330 for E-1 through E-5 which does not allow you to be on the local economy after that hour.

One method of doing some sightseeing is to take the Navy Indoctrination Course free tour which takes place each Tuesday. To get on the tour, call the Navy Human Relations Office and tell them who you are and ask for some seats for your crew. My crew took this trip and it was very interesting with stops at the President's home, a modern sculpture museum, a sheepskin processing plant, downtown Rejkjavik, the Alafoss Wool Factory Outlet, and a pottery. The trip takes all day and is well worth the time. Those of you who will be in Iceland during other than the winter months might also get a chance to take a tour to the geysers which I understand are quite spectacular.

All in all, I think you should enjoy your two weeks at Keflavik if you get the chance to go. There are lots of things to do even while you're on alert. So, don't get BOQits; get out and keep busy. I'm sure I haven't been able to cover everything that will happen and you might have some things to add to my list. The flying is totally unique and very enjoyable, and I'm sure you'll feel challenged by the variety of the mission and the real weather flying around Iceland. I hope you enjoy your tour with the Icelandic Tanker Task Force as much as I did.

CFIC CORNER

FLAPS-UP REVISITED

Major Steven J. Moore
Major John R. Moock
93rd BMW, Castle AFB

In the CFIC Corner June 80 we promised some more information on flaps-up training in the B-52. That article stirred up alot of interest, and as a result we now have some real empirical data to pass on to you guys. The following information was gathered in a strictly legal fashion, and a full-fledged touch and go was demonstrated to CEVG.

In the first article authored by myself and Billy Betz, we mentioned some techniques and data which were contrary to what many of us had believed for years. When we wrote that maybe we shouldn't really raise our seats to the full up position, we were deluged with calls. This time I declined to include our phone number (actually we do appreciate hearing your comments).

We also mentioned that the planned landing ground run is not that much longer than a flaps down planned landing ground run. A simple check of performance data will substantiate this. Perhaps the most controversial subject was in the area of landing attitude. We stated that while the attitude was quite different out on final, when we actually touched down the attitude was quite similar to that incurred when landing with the flaps down.

As a result of that article Brian O'Hara from Edwards AFB called us and asked if we might like to send some IPs down to accomplish some touch and go's. We jumped at the chance and sent three IPs down to Edwards to shoot some flaps-up touch and go's. We picked Brian's brain and accomplished about 20 touch and go's and one full stop, all with the flaps retracted. The information and data that we picked up substantiated much of what we were trying to say.

Consequently, when we submitted our trip report to HQ SAC, we included the results of our findings and a position paper which proposed including what we learned at Edwards into the CFIC curriculum. SAC DOT responded by asking us to develop a plan to implement a demonstration of a flaps-up touch and go into the CFIC curriculum. Phase one of this plan included the checkout of all B-52 IPs in CFIC on flaps-up touch and go's. This time we accomplished over 40 touch and go's and gathered alot more data.

First of all, the maneuver is not terribly hard to accomplish, provided the proper procedures and techniques are followed, but the maneuver is not nearly as forgiving as a normal flaps down landing. By far, the most important aspects of the maneuver are to stay on the glide path and stay on or slightly hot on airspeed. Any deviation from the above can lead to high sink rates which are detrimental to a good landing.

We also found that a seat position as close to normal as possible is best. However, you should be able to see the runway when on the glide path. With your seat in the recommended position and when on the glide path, the runway should appear very slightly above the bottom of your windshield (figure 1). It is important to realize that while the runway itself will look the same as it normally does (when on the glide path), it will be in a different location on the windshield (figure 1). The natural tendency is to place the runway closer to a normal (flaps down) location on the windshield. This will cause high sink rates. This tendency is especially strong at or below DH. Therefore, strict adherence to the glide path is essential at this point. Any deviation should be corrected with power immediately.

We also recommend that no flare be attempted (at light weights). Actually you might experience some difficulty in not flaring, and a slight push might be necessary at about 50 feet. We landed the aircraft with a slight flare and with no flare, and found the latter to be superior. Any flare was found to result in touchdown close to minimum touchdown speed with the aircraft in an exaggerated nose high attitude quite similar to a landing at minimum touchdown speed, flaps down. When landing at approach speed, the attitude was very close to a normal landing attitude. In fact, landing attitude demonstrations with the flaps up or down will look very similar to the average B-52 pilot.

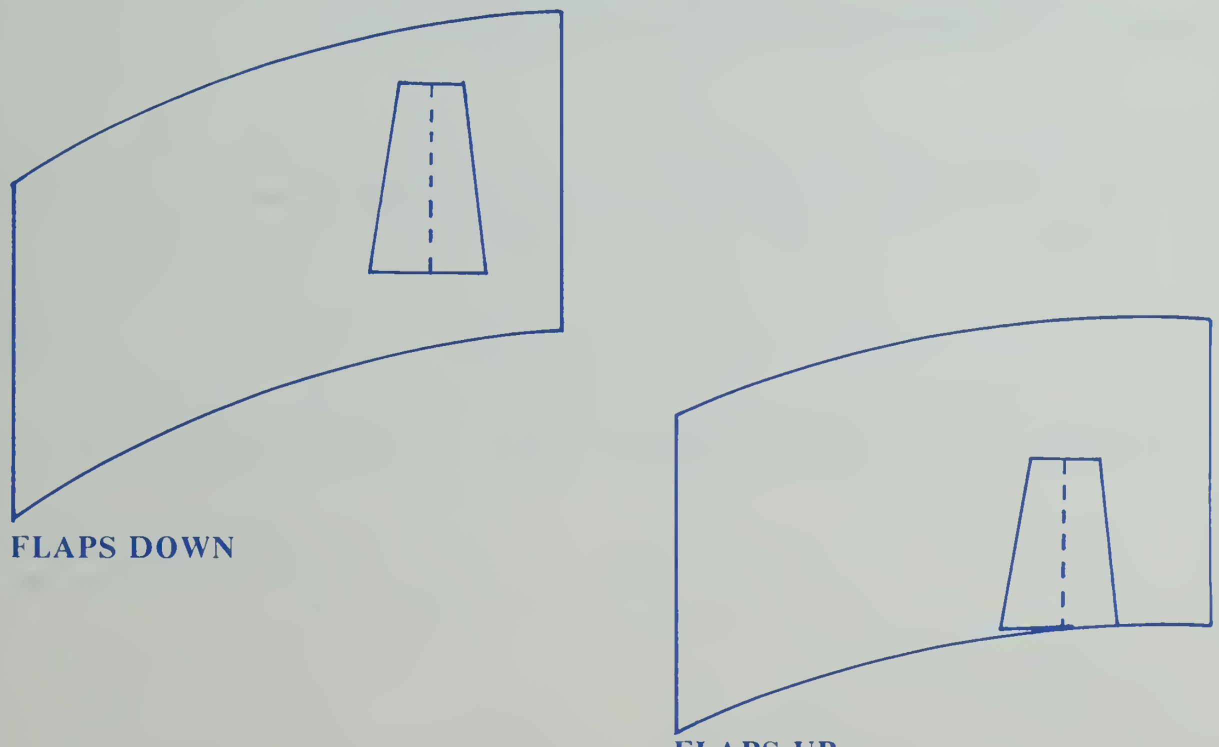
As the aircraft comes into ground effect a slight cushioning will be felt, and the aircraft might tend to float slightly at lighter gross weights (240,000 lbs). In this case, a small reduction in power will cause the aircraft to touchdown. The nose gear should be held off and flown down to the runway. At normal touchdown speeds this will not be difficult to do.

If for some reason you feel you must go around on the runway, retract the airbrakes, add power, do not change the trim, and as you get to approach speed (it will happen rapidly) apply back pressure; the aircraft will rotate about the aft gear. Back pressure applied prior to approach speed will prove to be ineffective. As the aircraft gets airborne, release back pressure and be prepared to trim in the nose down direction as the aircraft accelerates (very rapidly).

In all, the maneuver is not difficult to accomplish, but it is unforgiving of any deviation from the normal glide path or airspeeds. I hasten to point out that this maneuver is not legal to perform at any level. Thankfully with HQ SAC and CEFG's approval, we can now add a demonstration of a flaps-up touch and go landing to the CFIC curriculum. In the mean time, you can apply some of the information we have gathered to your low approaches. Religiously stay on the glide path and airspeed for the approach. Adjust your seat to the above recommended position. Do not attempt to reposition the runway picture on your windshield when going through DH.

In the future we will start passing word with demos of the landing. We are also working on some video tapes for distribution. We are making progress, just have a little faith in the HQ people and CEVG, and keep it safe.

Figure 1



FLAPS DOWN

FLAPS UP

LEST WE FORGET

1st Lt R. A. Jackson,
341 SMW
Malmstrom AFB

0800L — "Good morning, gentlemen. I am Captain Davis conducting predeparture briefing for Wing Operations." Here we go again; I've heard that opening statement over 100 times in the last 18 months. The briefing officer said something about the weather as I thought about the many maintenance teams, PAS checks I would have to put up with. To top it all off, the TV was broken again! The briefing concluded and I expected to hear the familiar dismissal order, but instead, an 0-6 took the floor.

"Gentlemen, you are not just another cog in the machine. How well each of you does your job directly contributes to our ability to maintain a credible deterrent force for our country. Each and every one of you plays a vital role in the defense of this nation and the free world. The people of this nation have entrusted you with control of the most powerful strategic deterrent force the free world has ever known. The threat to our freedom is ever-increasing; we need your best effort all of the time for the strength of our deterrent force to be effective. Missile alert duty in SAC is basically boring, repetitious work consisting of long hours on alert, countless exercises and continuous testing, training and evaluation. You as missile combat crew members must *NOT* let yourselves be drawn into thinking that the day-to-day events and requirements of your responsibilities are common place. The attitude of 'just another alert' can quickly lead to complacency, an attitude that could be detrimental to all of us. We must constantly remind ourselves of the underlying philosophy of SAC's mission. We must always remember that presenting a credible deterrent force to those who would challenge our freedom is the responsibility of us all. With the complexity of our daily lives, that basic philosophy can easily get covered or obscured. We need to remember that our mission is much more than just a job. We have a responsibility to our nation to do our best. We have a responsibility to ourselves to do our best. Complacency is one enemy we can defeat now and prevent from joining forces with other elements that would challenge our freedom. As professionals, we must guard against those elements of missile combat crew duty that can lead to development of commonplace attitudes about our importance and our responsibilities. Throughout the Strategic Air Command we must have a commitment to excellence in job performance and pride in what we represent. When each of us does our job well, we enhance our image as a powerful unit for our enemies to reckon with, and we also contribute to our nation's resolve and determination to protect the free world. Those who would perceive us as weak or faltering will be reminded of the strength and commitment of SAC if we all work together and strive for excellence."

Predeparture was dismissed — we came to attention as the Colonel departed. As we stood there, I thought to myself, "That man was really concerned — concerned enough to tell all of us how he felt." But more important, he reminded me of the principles we all stand for and how easily the job itself can lead one to lose sight of why we are missile combat crew members.

FLY THE AIRCRAFT

1Lt Norris D. Shane
407th AREFS, Loring AFB

I once heard a story of an early aviation pioneer who ended up in a spin under IFR conditions. This young pilot kept control of the situation and managed a successful recovery with not much altitude to spare. Anyone would agree that the feat was commendable; but think for a moment about the instrumentation available in those early machines de l'air. Picture yourself in the same pickle.

Does the thought produce chills? It should.

Available to that pilot was a crude altimeter, a turn and slip indicator, and an airspeed gauge (most likely mounted outside on a strut). These instruments might be adequate for you and me to hold straight and level flight for a few breathless minutes, but what about recovery of an unusual attitude with no outside references?

Today, we fly aircraft with redundancies galore. If one of our many generators poops out, we squirm a bit in the seat, but don't get too upset. Chances are we have an alternate attitude-indicating source independent of that primarily used. What if the alternate became unreliable? We are equipped with a turn and slip indicator which would, at worst, leave us with the same instrumentation as our shaken predecessor. Are we aware of the airplane's ability to be reduced to this level of simplicity and still operate safely?

More importantly, are we modern pilots capable of operating our aircraft safely with such a configuration? History indicates that we may not quite measure up to our ancestors in that respect. Recent accident investigations reveal numerous cases of perfectly flyable aircraft being driven into the ground. The worst cases involve those aircraft whose systems are all functioning normally, as was the case of an Eastern Airlines DC9 that landed 3.3 miles short of the runway in Charlotte, South Carolina in 1975. The crew overlooked two warning lights and actually silenced an altitude warning-horn prior to impact.

From day one, we are drilled with the phrase "fly the airplane first". Often, it takes a real trauma to drive home the wisdom of this old adage. My moment came one drenched Thanksgiving Eve, flying an hour-long night leg home after picking up a passenger at a distant airport. Arrival requested that I descend my single-engine prop-job 500 feet into the soup, promising lower in five minutes. The deck was 3,000 feet thick. There was high terrain ahead, close to the height of the overcast. Light rime icing was forecast. I objected, but was assured further descent in five minutes. There was nothing more than a light coating of frost on the windshield-mounted temperature probe when the airspeed indicator went to zero. Declaring an emergency, I announced my intentions to immediately climb. Applying full power, I increased the pitch one to two degrees. The controls mushed and the aircraft buffeted. In my mind, a grizzled, 20,000 hour-plus-type voice whispered "fly the airplane first". The rest is history, but after the other pitotstatic instruments went belly-up and the prop iced, we glided into the clear and were lucky enough to be able to limp to a nearby lighted airport on partial-power. Fly the airplane first. Those often-repeated words, articulated through sweaty lips during Undergraduate Pilot Training morning "EP's", given from instructors to students since the dawn of time, and muttered during millions of simulator check-rides, saved the day once again. Fly the airplane first. Take your time and fly the airplane first. If you have adequate forward movement and attitude information, you're rich; you can't go broke.

BIG "I"

IN THE GOOD OL' SUMMER TIME

Captain Rhett T. Cooper
1st Combat Evaluation Group
Barksdale AFB, Louisiana

As the welcomed summer months approach we begin to think of barbecue, boating, golf, leave, etc. However, let us not forget two facets of the flying business which should be reviewed around this time each year. Now what you're about to read isn't recreational in any manner, but need to know information that will help get us safely through the days ahead. If you've already guessed weather avoidance as one subject for discussion, you are correct! The second might not be quite as apparent. What about all those flyers, called "fair-weather VFR pilots," that enjoy the improved sky conditions and longer days of the upcoming months? Even though we file IFR, the "see and avoid" concept certainly applies during this period and means we must clear for other aircraft more than ever.

Although our first topic is weather avoidance, the basic circumnavigation ground rules for SAC pilots found in AFR 60-16, SAC Sup 1, are not going to be discussed. Instead, let's take a look at the assistance ATC can provide when questionable weather appears on our radar scope. Understanding

ATC's procedures/limitations will certainly be an inflight aid during the decision making process.

ATC radar displays weather clutter as a result of rain or moisture. Their radars cannot detect turbulence. The determination of the intensity of the weather displayed and commonly associated turbulence is based on cloud/weather precipitation density. ARTCCs are phasing-in computer generated digitized radar displays to replace the current broadband radar system. This new system, known as Narrowband Radar, will provide the controller with two distinct levels of weather intensity by assigning radar display symbols for specific precipitation densities. Even when the new system is totally operational, ATC will remain only an advisor to the pilot. Controllers issue pertinent information on weather and assist pilots in avoiding such areas when requested. We should respond to a weather advisory by acknowledging the advisory or by acknowledging the advisory and requesting an alternative course of action such as follows:

(1) A request to deviate off course should include the number of miles and direction of the requested deviation. (When ATC approves the deviation, we are expected to maintain our own navigation, and altitude assigned, to remain within specified mileage of the original course.)

(2) Request a new route to avoid affected areas.

(3) Request a change of altitude.

(4) Request radar vectors around the affected areas.

We must not deviate from any assigned course or altitude clearance until a revised clearance is received. When we encounter weather conditions so severe that an immediate deviation is necessary and time will not permit approval by ATC, our "pilots' emergency authority" may be exercised. If a pilot thinks ahead and plans properly, an emergency authority deviation will never be required. When we request a clearance for route deviation or for an ATC radar vector, the controller must evaluate the air traffic picture in the affected area and coordinate with other controllers (if ATC jurisdictional boundaries will be crossed) before replying to the request. Thinking ahead and having an alternate plan of attack are the obvious answers to successful weather avoidance.

A few more points need to be covered. The controller's primary function is to provide safe separation between aircraft. A service, such as weather avoidance assistance, can only be provided to the extent that it does not derogate that primary function — aircraft separation. This workload is usually greater when weather disrupts the normal flow of traffic. ATC radar limitations and frequency congestion may also be a factor in limiting the controller's capability to provide an additional service. To a large degree, the assistance that might be rendered by ATC will depend upon the weather information available to controllers. Due to the extreme transitory nature of severe weather conditions, the controller's weather information may be of limited value if it is based solely upon radar observed weather. Read the last sentence again. What say we help each other — pilot updates of adverse weather conditions with specific information such as affected areas, altitudes and intensity is of considerable value to the ATC network. In an airport or terminal control area, controllers are less likely to be able to accommodate requests for weather detours or be in a position to volunteer such routings to pilots. Just because we arrive at our airfield of intended landing the job isn't over. Have that divert plan ready and, if the suitability of the landing weather is in doubt, go elsewhere. All in all, it takes a professional in the air and on the ground to complete the mission when weather avoidance is required.

Let's talk about the congested airspace normally associated with summer flying. A high percentage of near midair collisions occur below 8,000 feet AGL and within 30 miles of an airport. When operating in these highly congested areas, it is most important that extra vigilance be maintained. Listening closely to approach control will "give us the picture" of the surrounding traffic. In the meantime, we must "clear" every chance possible; which brings us to a good question. How do you clear for other aircraft in any environment? If you don't have a systematic plan for clearing, the following may prove useful. After all, scanning the sky for other aircraft is a key factor in collision avoidance.

Clearing should be continually accomplished and cover all areas of the sky which are visible from the cockpit. Effective clearing is a series of short, regularly spaced eye movements that bring successive areas of the sky into the central field of vision. Let each movement cover about 10 degrees, and observe each area at least one second to enable detection. Although horizontal back-and-forth eye movements seem to be preferred by most pilots, each of us should develop a comfortable scanning pattern and then adhere to it to assure optimum clearing. As with any task, practice makes perfect and in this case, anything less than perfect could prove fatal.

Flying air machines should be fun. The additional burdens in the cockpit brought by the summer season will not change this premise if: (1) we properly plan ahead for adverse weather, and (2) stay heads-up for other aircraft.

A Most Unforgettable Mission

Capt Jim Leland
93 AREFS, Castle AFB

Everyone has at least one mission he would rather forget. However, if we examine these flights, they often yield a wealth of experience and most certainly contain a number of lessons to be learned. The following mission was no exception.

This most unforgettable mission occurred while the crew was TDY. The tanker missions were typical fighter drags. One tanker would depart early in the morning and proceed toward an island base to rendezvous with the deploying fighters. Later, two more tankers would take off and rendezvous with the first tanker and its fighters. The fighters would be escorted with periodic refuelings, to a drop-off point. The fighters then went on and the tankers returned to their launch base. On the first day of this two day deployment, all of the missions went according to plan. For the spare crew, the second day started with a 0500 mission briefing, the normal base operations routine, and the trip to the aircraft. Since their airplane was the spare for an earlier launch that day, the preflight checklist had already been accomplished by another crew. The new crew performed a somewhat cursory preflight, trusting the first crew. Just prior to taxi, the crew chief called the boom operator over to the crew entry chute and handed him a main gear down lock. The crew chief just happened to notice the streamer on his last chance check. Without further incident, the two aircraft scheduled to fly the mission taxied with the spare aircraft to the end of the runway. When number one tanker launched, the spare crew breathed a sigh of relief. However, their plans for an afternoon trip to a local alabaster factory were suddenly postponed when number two tanker aborted on the runway. The spare tanker was now number two in the cell; their takeoff was uneventful. However, the lead aircraft requested radar vectors for a return to base because of landing gear problems. In less than three minutes the crew went from spare tanker to number two, to the singular replacement for two tankers.

During climbout, the navigator started looking for his strip charts. To his dismay, he discovered that he did not have them. He quickly retrieved what few blank charts he had and furiously plotted the course from coast out through the air refueling rendezvous, to the refueling area, on to the drop-off point, and then home. Since the rendezvous point was approximately three inches off the edge of his chart, he used blank paper to plot the rendezvous area. About ten minutes prior to their scheduled arrival at the rendezvous point, the crew learned that instead of the planned twenty minute orbit, there would be no orbit at all. In fact, the early morning tanker and the fighters would rendezvous four minutes early. After several "stand-bys" to his crew and the other aircraft, the navigator "guesstimated" that a fifteen degree bank turn would

continued on page 26

"Everyone Talks About . . .
No One Does A Thing About . . ."

MSgt Watterson
DET 15
9th Weather Sq

Have you ever been on final when you suddenly broke through the base of the clouds and made a mental note to call the forecaster and pass on the information as soon as you had a chance. The next time you thought of it probably was when you were brushing your teeth the following morning.

Many pilots are under the impression that the only way to pass a PIREP to the forecaster is to switch the radio over to the Pilot to Metro frequency (PMSV). This is a misconception that we in the weather business wish to clear up. Although you, as pilots, may not realize it, we as weather forecasters are very dependent on you to be our eyes and ears away from the immediate area of the weather station.

We realize that when you are taking off, landing, or just flying around the flagpole shooting touch and go's that you are quite busy and don't always have the time to switch the radio over and talk to us. The point I wish to make is that during that time you normally are talking to someone. It may be RAPCON, or tower, or ground control; but some-

continued on page 26

SSgt Pernell Evins
Forecaster Det 1
9 WS, Offutt AFB

Photos by. A1C Gretel Desilets
3902 ABW/OTCP Offutt AFB

Missile Crew of the Month

Crew E-061 performed a followup inspection after maintenance on the cooling towers at a Titan complex and discovered the cooling tower pit flooded with three feet of water The electric motors were already partially submerged in water and the MCCC immediately dispatched the MSAT and MFT to deactivate the towers After deactivation the crew noticed the chilled water temperature had elevated to 21°F above normal. Also, two chillers were shut down, one automatically, and the one remaining chiller could not maintain an adequate supply of chilled water for cooling the silo and launch duct

The complex was placed in post attack mode to allow the hard water storage tank to take the place of the cooling towers. However, the hard water storage tank temperature was already above normal due to earlier operation in the post attack mode. The MSAT and MFT restarted the chiller which had automatically shut down and chilled water temperatures were returned to normal. This allowed the fluctuating launch duct temperature and propellant tank pressures to stabilize within normal limits. Because of the high hard water storage tank temperature, maintenance was expedited to the cooling towers topside in order to restore normal cooling operations. The facility pump for draining the cooling tower pit was nonoperational and the MFT waded into three feet of water in 10° F weather to set up a portable sump pump. The pit was drained and the cooling tower motors were made accessible to the maintenance teams.

Crew E-061's actions ensured that adequate cooling was provided for the launch complex and allowed maintenance to promptly begin repair actions to restore normal cooling operations.

381 SMW Crew E-061, 1Lt David B Cunningham, MCCC, 2Lt Robert N McGarry, DMCCC; A1C John C. Olmeda, MSAT, and SrA Steven L. Layton, MFT, have been selected as Strategic Air Command Missile Crew of the Month

PROFESSIONAL

Missile Maintenance Airman

TSgt Dennis W. Boutain, 341st SMW, Malmstrom AFB, is SAC ICBM Maintenance Airman of the Month. A nuclear munitions inspector-evaluator, assigned to wing quality control, he has a strong sense of self-motivation and total commitment to the mission. TSgt Boutain identified inadequacies in the Munitions Standardization and Evaluation Program training lesson plans and rewrote them entirely. This accomplishment was a key contribution toward the "Excellent" rating awarded Quality Control Division.

In one case, Sgt Boutain, discovered a Mark II reentry vehicle had been condemned and was scheduled for shipment off base He investigated and determined that repair could be accomplished using local technical data procedures. This saved the Air Force in excess of $25,000. He also developed an inspection system to cover the Limited Life Components exchange program. As a result, the system positively ensured that exchange components were 100% reliable. This resulted in the outstanding maintenance record of 75 LCC exchanges without a single failure, a truly remarkable feat.

Sgt Boutain's extraordinary accomplishments, dedication to the mission and true professionalism make him one of the finest NCOs, and an asset to the United States Air Force

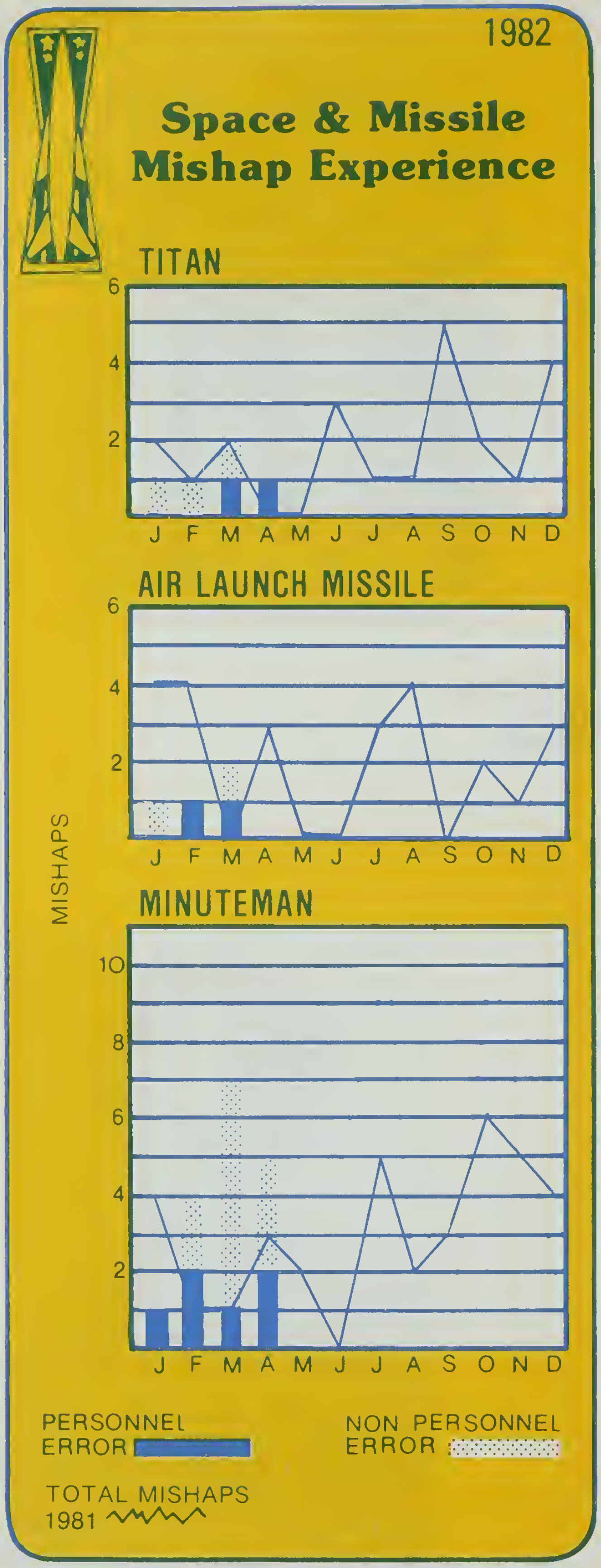
Flying Crew of the Month

Major Henry Williamson, FB-111 AC and Capt Leslie Andersen, RB, distinguished themselves during a training mission recently. While flying the low level portion of their mission, a low oil quantity warning light alerted Maj Williamson to a potential engine problem. The crew subsequently aborted the low level and shut down the left engine because of zero oil quantity indication and fluctuating oil pressure. With the immediate situation under control the crew elected to recover at their home station. While enroute to Plattsburgh AFB, the inertial navigation system failed just prior to encountering instrument flying conditions. The crew dumped fuel in preparation for a single engine landing. Capt Andersen attempted to realign the inertial system, performed the descent and single engine checklists, coordinated fuel dumping with appropriate agencies, checked the validity of his backup instruments, and accomplished the various checklists. On vectors to an instrument approach and during slat/flap extension, the windmilling engine seized. Landing gear extension was delayed until short final, and an otherwise uneventful landing was made. Postflight inspection discovered bearing failure of the left engine and foreign object damage to the right engine. Because of this crew's outstanding airmanship, while handling a complicated aircraft emergency in marginal weather conditions, valuable Air Force resources, lives and hardware, were saved.

PERFORMERS

Flight Maintenance Airman

SSgt Dennis J. Sawyer, 305th AREFW, Grissom AFB, is SAC Maintenance Airman of the Month. Sgt Sawyer demonstrates outstanding technical communicative and supervisory skills. He developed and constructed an APN-59 Ground Training Device, providing an excellent training tool for radar technicians. His reorganization of the branch composite tool kits merited comment from the SAC IG inspector who made special note of the outstanding control system being utilized. He has also volunteered to author a "Pre-end of the Course" test to evaluate individuals on upgrade training. It is through the dedicated professional efforts of individuals of Sgt Sawyer's caliber and initiative that the overall mission of the 305th AREFW will always be successfully completed.



CONFUSION . . .

Continued from page 5

about 200 feet behind our left wing. The total elapsed time for this whole scenario was about one minute.

I don't consider the cause of the engine separation to be important in this essay. I would rather focus on what my own sins of omission or commission were, and give some insight into the confusion a catastrophic engine failure can generate.

The first point is that we tend, after repeating a given task numerous times, to become lax in our mental preparation for that task. It becomes automatic and done with lip service to contingencies, if they are covered at all. We must be mentally prepared each time we fly in a flight regime that offers little margin for slowed reactions. In order to insure we are mentally prepared, we must practice strict self-discipline.

Secondly, each crewmember should inform the rest of the crew whenever they see anything out of the ordinary; generator lights, fire lights, etc. I learned later that the fire light for number two had come on but went out almost immediately. A crewmember noticed it, but didn't believe it was the time to bring it up. Granted, it might have added to the confusion, but it also may have helped clarify what was going on a little sooner.

Lastly, most emergency procedures practiced in the simulator consist of reacting to visual cues, such as a fire light or an overtemp on an engine. From day one, we are taught to respond to visual stimuli in an emergency situation. The simulators we train in do not or cannot reproduce the high confusion factors caused by the introduction of unfamiliar and excessive noises, erratic aircraft reactions, and real world radio transmission.

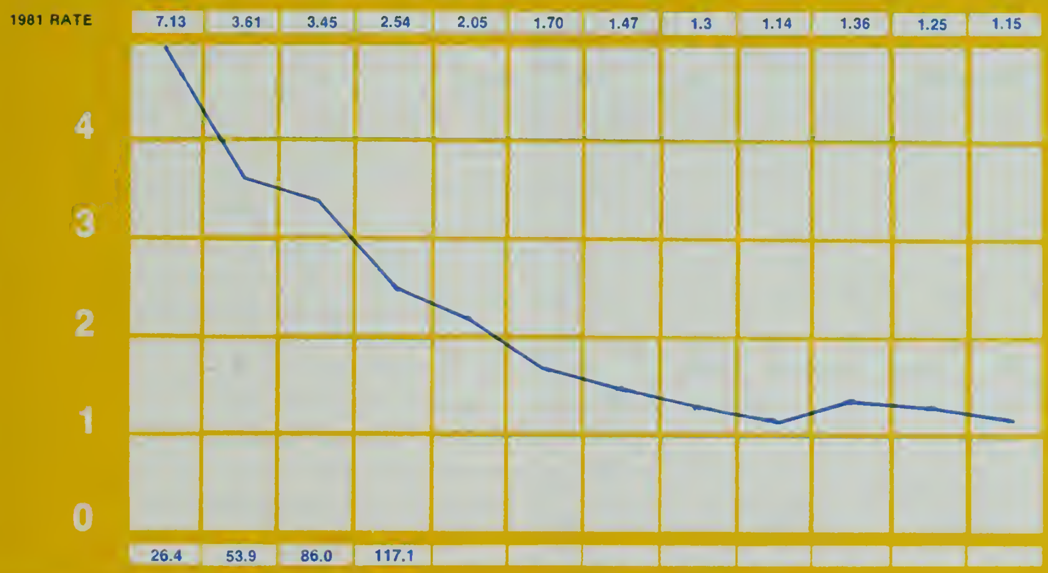
I was caught up in the initial confusion of the noise and peculiar aircraft reaction. This was compounded by receiving additional information which conflicted with my intuitive feeling of what really had happened. When we stopped, I was hesitant to shut down the engines and still wanted to believe nothing more serious had happened than a lost tire.

When you sit down to consider emergency procedures, try to imagine the cues which would be present during an emergency such as what the shelling of an engine might sound like. Try to anticipate what the aircraft's reaction might be in different phases of the ground roll and flight. Think of what the tower's or the SOF's reactions might be.

Finally, if someone says that you are on fire, believe them, for they have a much better view of your airplane than you do. If you are in the air, fly the airplane. If you are still on the ground and can abort, stop the airplane and take a crack at our 200 meter centerline team relay record.

1982 Flying Safety Rate

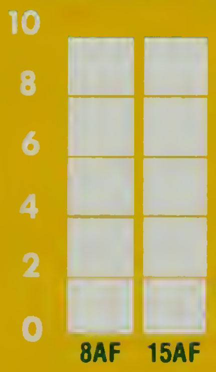
SAC CLASS A MISHAP RATE (PER 100,000 FLYING HRS)



CUMULATIVE FLYING TIME (1,000 HRS)

MISHAPS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1981	2	0	1	0	0	0	0	0	0	1	0	0
1982	0	0	0	0								

1982 SUBORDINATE CMD RATES



MISHAP STATUS

+KC-135A	MAR 82
+KC-135A	MAR 82

LEGEND ⁀ = 1981 RATE (SAC)
+ = ANG
– = AFRES

UNFORGETTABLE . . .

Continued from page 20

roll the plane out on course with the receiver somewhere close behind. To the crew's relief, it worked: they rolled out about five miles in front of the receivers. For a brief moment, the crew was now back on top of the situation.

However, two tankers now had to provide the fuel instead of the original three. The copilot began monitoring his fuel closely with the aid of the crew. After an hour, they discovered a twenty-thousand pound error in the fuel log — naturally in the wrong direction. Murphy's Law had prevailed once again. After coordination with the other tanker, each tanker varied its offload. This meant that the first tanker had to fly somewhat further than planned before leaving the formation and returning to base. The navigator had to determine accurate times to checkpoints, home, and alternate recovery bases in order to facilitate a crew decision on the maximum allowable offload. They were "flying down to the wire" when their luck finally turned. The fighters advised them they would not require their last two refuelings.

The prevailing two-hundred knot tailwind that had eliminated the orbit during rendezvous let the fighters reduce their fuel onloads. They got another break when they reversed course and climbed out of the jet stream. This manuever saved enough fuel to let them return to the launch base rather than divert to an alternate landing site. The last few hours were relatively serene. An uneventful landing was followed by the wine tasting party prepared by the crew that had aborted for gear problems.

The crew learned many lessons from the experience. The mission begins with the attitude you bring to the briefing. This crew was not expecting to fly. They were looking forward to a free afternoon. Among the problems that would have been prevented by a crew with a thorough professional approach are: The copilot's fuel log error, the navigator's lack of strip charts, and the pilot and boom operator's gear pin. The entire crew must give its utmost. If the crew chief had not taken the extra time needed to see the main gear down lock, the entire fighter drag mission would have been jeopardized. The navigator's improvisation provided a reasonable solution to the rendezvous problem. Once airborne, good coordination among the members of the crew and the other aircraft facilitated last minute changes to the flight plans and fuel offloads. Certainly this crew made mistakes. However, they were able to continue and complete the mission. More importantly, they learned from their errors. This crew now takes a much more professional approach to each mission, be it an actual flight or spare. Perhaps we can all learn from these errors and reflect back upon our own individual experiences. Undoubtedly the best approach to a deteriorating situation is to evaluate the events leading up to the problems before they occur. It is much easier to solve problems caused by complacency on the ground than under the pressure of flying a mission.

EVERYONE TALKS . . .

Continued from page 21

one is normally listening to you. Tell them about the weather you encountered. Believe it or not weather people aren't confined to windowless rooms totally cut off from the outside. We can and do talk to these same people on a frequent basis. If you pass on weather info to these people, the chances are excellent that we will receive the message within a matter of minutes.

Sure, you say, that's fine when I'm in the pattern but when I'm running a low level that's not possible. We agree with you; when you can't talk, you can't talk. But what about the time when you have finished the run and have climbed back to altitude? Give us a call then on the PMSV. You know the old saying "Everybody talks about the weather, but no one does anything about it." Well here's your chance. You may not be able to do anything about the weather but you sure can have an affect on the weather forecast. Your feedback on the weather you encountered will give the forecaster a much clearer picture of what's going on out there in your area.

Even when you are on one of those long boring cross country flights, you can be a great help to the forecaster. When you call into a PMSV facility to check on destination weather how about lending us a helping hand. Tell the forecaster what you have encountered along the way. This is especially true if you run into weather that wasn't in the forecast. We ground pounders are never going to know about it unless you tell us. On those occasions when you run into particularly nasty weather, before cursing, tell someone about it. Pass it on to one of the centers. You know nothing travels faster than bad news. You can be assured your message will get to a weatherman's ear.

I assume if you have read this far you are interested in helping out. Your question is what is it the forecaster wants to know. Well, we want to know what weather you found significant enough to interest you, but we would also like to hear about any of the following:

1. Any icing (rime, clear, or mixed)
2. Turbulence/wind shear
3. Thunderstorms/hail/lightning
4. Cloud bases and tops
5. Precipitation
6. The location of the edges of cloud or fog banks

Anytime you run into one of the above I guarantee the forecaster will be interested. This is particularly true if it wasn't mentioned on your weather briefing. If your forecaster didn't talk about it he/she doesn't know its out there. Help us do our job better. Talk about the weather!

SAC
SAFETY SCREEN

307 AREFG, Travis Crew E-136: P Capt Scott D Jewkes, CP 1Lt Mario Mastrandrea, Jr, N Capt Jay D Kleven, BO SSgt John W Oglesby

2 BMS, March Crew S-20: P Capt Charles H Patrum, CP Capt John G Prunty, RN Capt Harry R Mandros, N 1Lt Joseph C Grimme, EWO 1Lt Matt W Oswalt, AG SrA R Thomas Boyer Jr

24 SRS, Eielson Crew S-02: P Capt Eric C Juhre, CP 1Lt Donald P Sewell, N-1 Capt Steven C Eivins, N-2 Capt William E Parker

24 SRS, Eielson Crew S-12: P Capt James P O'Leary, MT Capt Richard N Hansen, ATSO R-1 Capt Joseph F Kettner, ATSO R-2 Capt David M Trask, RTOS Capt Robert R Jensik, R-4 Capt Reginald D Parks, ET TSgt Malcolm E Baker, ET SSgt Steven S Wiseman

22 AREFS, March Crew R-133: FP Capt James E Mateski, CP 1Lt Theodore R York, NN 1Lt John A Dowless, BO A1C John A Mesquita

170 AREFG, McGuire (NJANG): P Maj Joseph W Raymond, CP Maj Edwin M Corns III, N Capt Robert B Levine, BO SMSgt William E Kriews

308 SMW, Little Rock Crew R-092: MCCC 1Lt Gregory D Gaines, DMCCC 2Lt Ferebee Thomas, MSAT A1C Dewain O Feller, MFT A1C Charles J Powell Jr

351 SMW, Whiteman Crew R-081: MCCC Capt Billy L Wineinger, DMCCC Capt Roy R Parker

341 SMW, Malmstrom Crew E-151: MCCC 1Lt J Young Mayberry, DMCCC 2Lt Gary D Weaver

390 SMW, Davis-Monthan Crew S-224: MCCC Capt Charles F Gregory, DMCCC 2Lt Floyd T Baldwin, MSAT Sgt Wayne R Frey, BMFT SrA Jerry D Fontaine

44 SMW, Ellsworth Crew E-116: MCCC 1Lt Neal J Conrad, DMCCC 2Lt Joseph E Mecadon

90 SMW, F E Warren Crews E-005A/E-183A: MCCC 1Lt Robert J Hubiak (Crew E-005A), DMCCC 1Lt David J Radefeld (Crew E-183A)

321 SMW, Grand Forks Crew E-140: MCCC Capt David A Goller, DMCCC 2Lt Thomas P Ehrhard

The SAC Safety Screen is an honor roll of SAC's most professional crews. To gain listing on the Screen, crew members must be nominated by their unit commanders and meet high selection criteria of experience in their aircraft or missile system *IAW AFR 127-2/SS1*.

UNIVERSITY OF FLORIDA
3 1262 09683 6332

HALL OF FAME

FLARE

TACTICAL FLYING

OVER TWENTY-SIX YEARS

170 AREFG, McGuire (NJANG)	Feb '56

OVER TWENTY-FOUR YEARS

171 AREFW, Greater Pittsburgh (PAANG)	Mar '58

OVER TWENTY-THREE YEARS

157 AREFG, Pease (NHANG)	Jun '58
940 AREFG, Mather (USAFR)	May '59

OVER TWENTY-TWO YEARS

307 AREFG, Travis	Sept '59

OVER TWENTY-ONE YEARS

151 AREFG, Salt Lake City (UTANG)	Feb '61

OVER TWENTY YEARS

134 AREFG, McGhee Tyson (TNANG)	Aug '61
11 SG, Fairford	Feb '62

OVER NINETEEN YEARS

340 AREFG, Altus	Jun '62
96 BMW, Dyess	Aug '62

OVER EIGHTEEN YEARS

19 BMW, Robins	Aug '63

OVER SEVENTEEN YEARS

160 AREFG, Rickenbacker (OHANG)	Dec '64

OVER SIXTEEN YEARS

320 BMW, Mather	Jul '65

OVER FIFTEEN YEARS

452 AREFW, March (USAFR)	Sep '66
92 BMW, Fairchild	Feb '67

OVER FOURTEEN YEARS

55 SRW, Offutt	Jul '67
2 BMW, Barksdale	Aug '67

OVER THIRTEEN YEARS

5 BMW, Minot	Feb '69

OVER TWELVE YEARS

42 BMW, Loring	Sep '69
141 AREFW, Fairchild (WAANG)	Oct '69
28 BMW, Ellsworth	May '70

OVER TEN YEARS

101 AREFW, Bangor (MEANG)	Mar '72
306 SW, Mildenhall	Apr '72
416 BMW, Griffiss	May '72

OVER NINE YEARS

305 AREFW, Grissom	Aug '72
379 BMW, Wurtsmith	Apr '73

OVER EIGHT YEARS

931 AREFG, Grissom (USAFR)	Feb '74
384 AREFW, McConnell	Mar '74
189 AREFG, Little Rock (ARANG)	May '74

OVER SEVEN YEARS

43 SW, Andersen	Dec '74

OVER SIX YEARS

68 BMW, Seymour Johnson	Sep '75

OVER FIVE YEARS

410 BMW, K.I. Sawyer	Apr '77
190 AREFG Forbes (KSANG)	Apr '77

OVER FOUR YEARS

128 AREFG Milwaukee (WIANG)	Jul '77

ICBM

OVER SEVENTEEN YEARS

1 STRAD, Vandenberg	Sep '64

OVER TWELVE YEARS

341 SMW, Malmstrom	Apr '70

OVER EIGHT YEARS

390 SMW, Davis-Monthan	Jul '73

OVER SEVEN YEARS

351 SMW, Whiteman	Oct '74
91 SMW, Minot	Nov '74

OVER SIX YEARS

321 SMW, Grand Forks	Feb '76

To gain listing in the Hall of Fame, a SAC or ARF unit must be Class A mishap-free for 48 months.

*U.S. Government Printing Office
1981 — 765 047 11